



# Salivary Hormones

## Key Clinical Messages

### What is the Salivary Hormones Test?

The Salivary Hormones Test is a panel of 18 hormone analytes that measure diurnal sex steroid and glucocorticoid hormone output. The samples are collected at home, in saliva, four times daily. Salivary hormone testing measures bioavailable hormone production rather than protein-bound hormone production, which is typically measured in serum.

### Which patients benefit from the Salivary Hormones Test?

Patients presenting symptoms of sex steroid hormone imbalances or suspected adrenal and/or HPA axis imbalances would benefit from saliva hormone testing. Patients utilizing topical hormone therapy may also benefit from saliva hormone testing.

Suspected Adrenal/HPA Axis Imbalances (Cortisol/Cortisone)	
Chronic fatigue syndrome Chronic stress Fibromyalgia Sugar cravings/hypoclycemia Depression Weight gain	Dry, dull appearance of skin Poor stamina Thyroid problems Thinning hair, eyebrows PTSD/early traumatic experiences

### Why order the Salivary Hormones Test?

Saliva-collected steroid hormones are unconjugated and/or bioavailable, unlike the total or protein-bound hormones measured in serum.<sup>1</sup> Due to this unique feature, salivary hormone testing is an alternate lens to evaluate hormone-related symptomatology. Studies have shown saliva hormone testing provides an accurate diagnosis of Cushing’s disease and adrenal insufficiency,<sup>2</sup> as well as a more direct assessment of target tissue hormone levels.<sup>3</sup> Furthermore, salivary hormone levels are a more sensitive measurement of transdermal hormones, such as progesterone than serum and whole blood levels.<sup>4</sup>

In addition to these clinical advantages, collecting salivary hormones offers patients more convenience than serum testing. Patients collect samples themselves in their homes. Because of this ease of collection, salivary samples are convenient to collect at several points throughout the day. Additionally, there is no increased glucocorticoid release from the stress of venipuncture for the patient.

Suspected Sex Steroid Hormone Imbalances (E, Pg, T, DHEA-S)	
Menopause Hot flashes Night sweats Headaches/menstrual migraines Irritability/mood changes Fibrocystic breasts PMS Poor cognition/brain fog	Increased facial hair/acne Irregular menstrual cycles PCOS Low libido Andropause Erectile dysfunction Decreased muscle mass/strength Decreased urinary flow (men)

**References**

1. Stanczyk FZ. Treatment of postmenopausal women with topical progesterone creams and gels: Are they effective? Climacteric. 2014;17(Suppl 2):8-11. doi:10.3109/13697137.2014.944496
2. Bäcklund N, Brattsand G, Israelsson M, et al. Reference intervals of salivary cortisol and cortisone and their diagnostic accuracy in Cushing’s syndrome. Eur J Endocrinol. 2020;182(6):569-582. doi:10.1530/EJE- 19-0872
3. Gröschl M. Saliva: A reliable sample matrix in bioanalytics. Bioanalysis. 2017;9(8):655-668. doi:10.4155/ bio-2017-0010
4. Du JY, Sanchez P, Kim L, Azen CG, Zava DT, Stanczyk FZ. Percutaneous progesterone delivery via cream or gel application in postmenopausal women: a randomized cross-over study of progesterone levels in serum, whole blood, saliva, and capillary blood. Menopause. 2013;20(11):1169-1175. doi:10.1097/ GME.0b013e31828d39a2



## What markers are included on the Salivary Hormones Test?

Saliva Steroids Hormones	Saliva Cortisol	Saliva Cortisone
Estradiol (E2) Estrone (E1) Estriol (E3) E3/(E1+E2) Ratio Progesterone (Pg) Pg/E2 Ratio Testosterone DHEA-S	Cortisol (Pooled) Cortisol (Morning) Cortisol (Noon) Cortisol (Evening) Cortisol (Night)	Cortisone (Pooled) Cortisone (Morning) Cortisone (Noon) Cortisone (Evening) Cortisone (Night)

## Which tests pair well with the Salivary Hormones Test?

### Vibrant Wellness Tests

- **Urinary Hormones:** For further workup of Saliva Hormones abnormalities, the Urinary Hormones test will provide additional insights into estrogen and cortisol metabolism, progesterone and androgen metabolites, and melatonin and oxidative stress.
- **Neurotransmitter Test:** Dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis is associated with alterations in the serotonergic system.
- **NutriPro or Methylation Panel:** Reveals genetic polymorphisms which may lead to estrogen metabolism issues (MTHFR, COMT).
- **Gut Zoomer:** Tests for microbiome and estrobolome influences.
- **Environmental Toxins & Heavy Metals:** Factors that affect elevated estrogens and reduced testosterone, as well as chronic health ailments.

### Vibrant America Tests

- **Thyroid panel:** The thyroid gland plays a crucial role in hormone balance. By including a thyroid panel in the testing, you can assess thyroid hormone levels, as well as thyroid-stimulating hormone (TSH) to determine if there are any abnormalities in thyroid function that may be contributing to symptoms.
- **Chem screen:** Liver, gallbladder, and renal testing can provide insights into hormone clearance.
- **Vitamin D:** Hormone imbalances, particularly estrogen, progesterone, and testosterone, can affect vitamin D metabolism and utilization. Conversely, vitamin D deficiency or insufficiency can impact hormone production and balance.

## Are there resources available for the interpretation of Salivary Hormone Test results?

The [Saliva Hormone Interpretive Guide](#) is a comprehensive resource available in the education portal which provides general information on salivary hormone testing, interpretation of elevated and decreased test results, and evidence-based, lifestyle-related interventions.



### Regulatory Statement:

This test has been laboratory developed and their performance characteristics determined by Vibrant America LLC, a CLIA-certified laboratory performing the test CLIA#:05D2078809. The test has not been cleared or approved by the U.S. Food and Drug Administration (FDA). Although FDA does not currently clear or approve laboratory-developed tests in the U.S., certification of the laboratory is required under CLIA to ensure the quality and validity of the tests.

## Lab Methodology

Vibrant America utilizes liquid chromatography-tandem mass spectrometry (LC-MS/MS) exclusively for salivary hormone testing, resulting in high specificity compared to immunoassays. LC-MS/MS also allows simultaneous measurements of multiple analytes and has a low limit of quantification which means precision and accuracy, despite low hormone levels in the sample. Vibrant is a CLIA-certified and CAP-accredited lab.

## How to Prepare for the Test

**Collection:** 4 tubes of saliva sample collection (Waking, Noon, Evening, Bedtime). Includes specific collection instructions for menstruating women regarding the timing of collection with the menstrual cycle.

**Fasting:** Not required – Rinse mouth with water and wait 5 minutes before sample collection.

**Diet Restrictions:** Not required.

**Medication Restrictions:** None.

**Supplement Restrictions:** Not required.

## Reference Ranges

Reference ranges have been established using a sample cohort of 300 relatively healthy adult samples for each analyte tested. The low and high reference limits are the values of the 2.5th and 97.5th percentiles, respectively.

The reference ranges are based on gender and menstrual phase as applicable for sample testing and are available in the report based on the information provided during sample order.